REQUEST FOR LABORATORY SAMPLE ANALYSES

Site Name: Wilcox Oil Company	City/State: Bristow, OK	CERCLIS #: OK0001010917
GPRA Account #:2015 T 06L 06GGCO00	Site Spill ID # 06GG	Type of Investigation/Purpose: RI
EPA SAM, RPM, OSC: Katrina Higgins-Coltrain (RPM) Mail Code: 6SF-RL	Analytical Turnaround Time Region 6 Lab: 35X_ CLP Organics: 7 14 21_X_ CLP Inorganics: 7 14 21 X_	Type of Contract: EPA RAC Contractor: Patrick Appel Direct: 972-453-5038 Cell: 817-437-0563 Luis Vega Direct: 972-459-5040 Cell: 214-280-9031
		Shipping Contact: Patrick Appel and Luis Vega
Telephone #: 214-665-8143	Are preliminary results required? 48 hrs VOA () Yes (X) No	Telephone #: see above
Fax #:	72 hrs Extractables () Yes (X) No 72 hrs Inorganics () Yes (X) No	On Site Ph #: see above
		E-Mail address: Patrick Appel pappel@eaest.com Luis Vega Ivega@eaest.com
Potential Enforcement Action? () Yes (X) No	Requires justification and prior approval.	Date Sample Control Center Received Request For Sample Analysis:
Proposed Sampling Period	week of October 23, 2017	,

Please assure that this request for analytical services has been signed and dated by the appropriate Site Assessment Manager, Remedial Project Manager, or On Scene Coordinator. Please assure that the Sample Control Center has a copy of all relevant Quality Assurance Project Plans (QAPPs) and Sampling and Analysis Plans (SAPs).

Is the QAPP, QASP, SAP, O&M Plan, GWMP,DAW, or other relevant plan being submitted with this Request For Sample Analyses? QAPP was previously submitted 6/30/16

If no, please explain (expected date of submission etc.):

Submitted 6/30/16

Signature of EPA S	Site Assessment Manager (SAM), Remedial Project Manager (RP	M), or On Scene
Coordinator (OSC	C) to signify approval of this analytical service request.	
Signature:	Date:	

To most efficiently obtain laboratory capability for your request, please address the following considerations. Incomplete or erroneous information may result in a delay in the processing of your request.

1. General description of analytical services requested: (QA/R5 - Element B1)

Matrix	, , , , , , , , , , , , , , , , , , ,		Field QC Samples		
		(without QC) high/low conc	How many?	Type?	
Matan	Volatiles (including EDB)	21	2	Trip blank	
Water	Low Water		2 1	Duplicate Matrix Spike	
			2	Field Blank	
	Semivolatiles	21	2	Duplicate	
	Low Water		1	Matrix Spike	
	PAHs	21	2	Duplicate	
	Low Water by SIM		1	Matrix Spike	
	Hexavalent Chromium (total)	21	2	Duplicate	
			1	Matrix spike	
	Hexavalent Chromium	21	2	Duplicate	
	(dissolved)		1	Matrix spike	
	Metals including mercury (total)	21	2	Duplicate	
			1	Matrix spike	
	Metals including mercury	21	2	Duplicate	
	(dissolved) Cyanide	21	2	Matrix spike Duplicate	
	Cyanilde	21	1	Matrix spike	
	Total organic carbon	21	2	Duplicate	
	Total organic carbon	21		Daplicate	
	hardness	21	2	Duplicate	
	Total dissolved solids	21	2	Duplicate	
	Total suspended sediment	21	2	Duplicate	
	alkalinity	21	2	Duplicate	
	Volatiles	21	2	Trip blank	
Sediment			2	Duplicate	
			1	Matrix spike	
			2	Equipment Blank	
	Semivolatiles	21	2	Duplicate Matrix spike	
	PAHs	21	1 2	Matrix spike Duplicate	
	1 7119	۷۱	1	Matrix spike	
	Metals including mercury	21	2	Duplicate	
	tale including moroary		1	Matrix spike	
	Cyanide	21	2	Duplicate	
			1	Matrix spike	
	AVS/SEM	21	2	duplicate	
	Total Organic Carbon	21	2	duplicate	
	Grain size	4	1	duplicate	
	pH	21	2	dupliacte	

Additional description (areas where samples are being collected etc.):

2. Analytical protocol required (analytical method & method number, extraction or digestion method & method number, CLP SOW reference, for each matrix if required, etc.): (QA/R5 - Element B4)

Current CLP methods (04/06/16) are: Organics by SOM02.3 Inorganics by ISM02.3

Refer to attached Table 12 and excel sheets.

Matrix	Analysis	Methods	
	Volatiles	5035 + SOM02.3 (Low Soil)	
Soil	Semivolatiles	SOM02.3 (Low Soil)	
	PAHs	SOM02.3 (Low Soil by SIM)	
	Metals including mercury	ISM02.3/ICP-MS (with ICP-AES for salts only)	
	Cyanide	ISM02.3	
	Volatiles	SOM02.3 (Low Water)	
Water	Semivolatiles	SOM02.3 (Low Water)	
	PAHs	SOM02.3 (Low Water by SIM)	
	Metals, including mercury	ISM02.3/ICP-MS (with ICP-AES for salts only)	
	Cyanide	ISM02.3	
	Hexavalent Chromium	SW-846 Method 7199 or Standard method 218.7	
	Total organic carbon	Standard Method 5310	
	hardness	EPA Method 130.2	
	Total dissolved solids	EPA Method 160.1	
	Total suspended sediment	ASTM Method D 3977-97	
	alkalinity	Standard Method 2320 B	
	Volatiles	SOM02.3 (Low)	
	Semivolatiles	SOM02.3 (Low)	
	PAHs	SOM02.3 (Low by SIM)	
Sediment	Metals, including mercury	ISM02.3/ICP-MS (with ICP-AES for salts only)	
	Cyanide	ISM02.3	
	AVS/SEM	EPA 821/R-91-100	
		SW-846 Method 6010C/9034	
	Total Organic Carbon	Standard Method 5310B	
	Grain size	ASTM Method D422	
	рН	SW9045C	

Additional Information:

Complete the following information if Method 5035 for VOA soils has been requested:

	of medium conc. soils	Type of Vials	# of low conc. soils	# of medium conc. soils
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Three 5- gram coring tool devices	<mark>35</mark>			
(e.g., EnCore) samplers				

- 3. CLP Modified Analysis Clause The latest Statement of Works (SOWs), includes a modified analysis clause. The modified analysis allows the regions to request minor changes to current SOW analytical methods in order to meet specific field site requirements. The changes are limited in scope and must be approved by the EPA CLP Program Manager and Contracting Officer before implementation. Information must be submitted <u>three weeks</u> prior to the sampling event. The information the client must submit three weeks prior to the sampling event are; Lab Request Form and the approved sampling plan/QAPP.
- 4. Analytical results required (specify laboratory documentation and reporting requirements, reporting units, format requirements, etc.): (QA/R5 Elements A6 and B4)

Standard CLP and/or EPA Region 6 Houston Lab deliverable

5. Data requirements (reporting limits; per analyte per matrix; reporting units; applicable reference levels, etc.): (QA/R5 - Elements A7, B1, and B4) (Attach extra pages if necessary) For CLP capabilities - http://www.epa.gov/superfund/programs/clp/facts.htm. For Region 6 Laboratory capabilities - http://www.epa.gov/earth1r6/6lab/r6lab.htm

Note: Samples submitted to the CLP for analysis must be low or medium concentration, single phase, homogenous (not oily), soil, sediment, or water. Also, samples with matrix related problems (oily material, high concentration of compounds, etc.) and/or high moisture content will raise the method CRQL's.

a. Compounds/chemicals of concern (Action levels etc.) – Required information – List the compounds/analytes driving the investigation and the action level required to meet DQO's.

Parameters	Action Levels / Detection Limits			
	water (µg/L) soil/sediment (µg/kg)			
Primary focus: PAHs are the target compounds for site media.				
Secondary focus: metals in water.				

The excel tables provide the volatile, semivolatile, PCB, Pesticide, Dioxin, and metals parameters that are of highest interest for the site. The Project screening level is the requested Action Level/Detection limit for this project. Tab 1 is for ground water, Tab 2 is for air, and Tab 3 is for soil.

6. QC Requirements (PE samples & frequency, spikes, duplicates, blanks, & frequency)

QC Type	Frequency	QC Limits
Trip Blank	1 per cooler	See Tables 12 and 4 in final SAP.

Duplicate	1 per 10
Matrix Spike	1 per 20

Matrix	Analysis	Reporting Limit Requested
	TOC	1 mg/L
	Total alkalinity	1 mg/L
Water	TDS	10 mg/L
	Hardness	10 mg/L
Sediment	AVS/SEM	μmol/g (micromole/gram) – not specified/lowest obtainable
Countrient	Total Organic Carbon	mg/kg – not specified/lowest obtainable